

REMARKS

Claims 2 through 4, 19, and 20 have been canceled. Claims 1, 5, 16, 21, 28, and 29 have been amended. Claims 1, 5 through 18, and 21 through 29 remain in the application.

The drawings were objected to because of alleged informalities. Applicants respectfully traverse this objection.

As to the scallops 170, they are located on the correct side to prevent reverse travel of the cable 184 as illustrated in Figure 4. If the Examiner were to take a protractor from the pivot point of the stud 168 to the points made by the scallops 170, he would note that while the first two points from the scallops 170 may pivot away from the cable 184 due to the arc made, the last two points from the remaining scallops 170 would engage the cable 184 against the clamping surface 190 due to the arcs of last two points of the scallops 170 as illustrated in Figure 5. This occurs because the last two points of the remaining scallops 170 are a further distance away from the pivot point than the first two points of the scallops 170. As such, the scallops 170 are located on the correct side of the cam 166. Therefore, it is respectfully submitted that the drawings overcome the objections and are acceptable.

The Amendment filed on April 29, 2003 was objected to under 35 U.S.C. § 132 because it allegedly introduces new matter into the disclosure. Applicants respectfully traverse this rejection.

The subject matter of the later claim need not be described literally or “in haec verba” in order for the specification to satisfy the description requirement. See Fujikawa v. Wattanasin, 93 F.3d 1559, 1570, 39 U.S.P.Q.2d 1895, 1904 (Fed. Cir. 1996) (“*ipsis verbis* disclosure is not necessary to satisfy the written description requirement of section 112. Instead, the disclosure need only reasonably convey to persons skilled in the art that the inventor had

possession of the subject matter in question.”); In re Alton, 76 F.3d 1168, 1175, 37 U.S.P.Q.2d 1578, 1584 (Fed. Cir. 1996) (“If a person of ordinary skill in the art would have understood the inventor to have been in possession of the claimed invention at the time of filing, even if every nuance of the claims is not explicitly described in the specification, then the adequate written description requirement is met.”)

The Examiner has determined that the ratio on page 19, lines 15 through 16, is unclear. The Examiner wants to know the ratio is what to what? Applicants amended the specification on page 19, lines 15 through 16, to state that the ratio is of torque lever length to clamping lever length. The Examiner has determined that this addition is new matter. However, the subject matter need not be described literally or “in haec verba” in order for the specification to satisfy the description requirement. This addition is not new matter because it is found in the drawings and a person of ordinary skill in the art would have understood this. To appease the Examiner, Applicants have amended the specification to remove this phrase. Therefore, it is respectfully submitted that the specification is allowable over the objection.

The disclosure was objected to because of an informality on page 19. Applicants respectfully traverse this objection.

The specification has been amended on page 19, lines 15 and 16, to delete reference to the ratio. It is respectfully submitted that the specification is allowable over the objection.

Claims 1 through 28 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants respectfully traverse this rejection.

Although Applicants disagree with the Examiner that the phrase “to rotate in a counterclockwise direction” is indefinite, claims 1, 16, and 28 have been amended to delete the phrase “to rotate in a counterclockwise direction”. It is respectfully submitted that claims 1 through 28 are allowable over the rejection under 35 U.S.C. § 112, second paragraph.

Claim 29 was rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant respectfully traverses this rejection.

An analysis of whether the claims are supported by an enabling disclosure requires a determination of whether that disclosure contained sufficient information regarding the subject matter of the claims as to enable one skilled in the pertinent art to make and use the claimed invention. The test for enablement is whether one skilled in the art could make and use the claimed invention from the disclosure coupled with information known in the art without undue experimentation. See United States v. Teletronics, Inc., 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed. Cir. 1988), cert. denied, 109 S.Ct. 1954 (1989); In re Stephens, 529 F.2d 1343, 1345, 188 U.S.P.Q. 659, 661 (C.C.P.A. 1976).

In order to make a rejection, the Examiner has the initial burden to establish a reasonable basis to question the enablement provided for the claimed invention. See In re Wright, 999 F.2d 1557, 1561-62, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993)(Examiner must provide a reasonable explanation as to why the scope of protection provided by a claim is not adequately enabled by the disclosure).

Thus, the dispositive issue is whether Applicants’ disclosure, considering the level of ordinary skill in the art as of the date of Applicants’ application, would have enabled a person

of such skill to make Applicants' invention without undue experimentation. The threshold step in resolving this issue as set forth supra is to determine whether the Examiner has met his burden of proof by advancing acceptable reasoning inconsistent with enablement. This the Examiner has not done.

The Specification clearly states, on page 19, lines 3 through 7, that the torque about the stud 168 rotates the cam 166 toward the buckle assembly 30 and into the cable 184 and compresses the cable 184 between the cam 166 and a clamping surface 190 of the frame 134 as illustrated in Figure 5. The Specification clearly states, on page 19, lines 7 through 9, that the cam 166 generates a clamping force on the cable 184 and prevents reverse travel of the cable 184 and therefore the buckle assembly 30. The Specification clearly states, on page 19, lines 12 through 13, that it should be appreciated that the scallops 170 engage the cable 184. FIGS. 4 and 5 clearly show that the scallops 170 are located on the correct side to prevent reverse travel of the cable 184. If the Examiner were to take a protractor from the pivot point of the stud 168 to the points made by the scallops 170, he would note that while the first two points from the scallops 170 may pivot away from the cable 184 due to the arc made, the last two points from the remaining scallops 170 would engage the cable 184 against the clamping surface 190 due to the arcs of last two points of the scallops 170 as illustrated in Figure 5. This occurs because the last two points of the remaining scallops 170 are a further distance away from the pivot point than the first two points of the scallops 170. As such, the scallops 170 are located on the correct side of the cam 166. One skilled in the art would clearly have sufficient information regarding the subject matter of the claims as to enable one skilled in the pertinent art to make and use the claimed invention.

Claim 29 has been amended to delete the language as to the reverse travel. It is respectfully submitted that claim 29 is allowable over the rejection under 35 U.S.C. § 112, first paragraph.

Claims 1, 2, 9, 16, 19, 23, and 25 through 28 were rejected under 35 U.S.C. § 102(b) as being anticipated by Meyer et al. (U.S. Patent No. 6,068,664). Applicants respectfully traverse this rejection.

U.S. Patent No. 6,068,664 to Meyer et al. discloses a tightening device for use with safety belts with eccentric locking. A cable 10 supports a belt buckle 11 and its other end is connected to a drive device 12, which is comprised of a cylinder 13, a piston 14 guided therein, and a propelling charge 15. The cable 10 is fastened to the piston 14. Between the belt buckle 11 and the drive device 12, the cable 10 is guided about a deflection device, which is comprised of an eccentric pawl 16 rotatable about a rotational axis 23. The eccentric pawl 16 for the purpose of deflection in the initial position comprises a deflection end 18 about which the cable 10 is guided, whereby adjacent to the deflection end 18, viewed in the tightening direction, i.e., in the direction of movement of the piston 14 in the cylinder 13, an eccentric arc 19 is provided which has an outer tothing 20. With such a geometric design of the eccentric pawl 16, it is ensured that upon return movement of the cable 10 counter to the tightening direction the force acting via the deflection end 18 has a sufficient leverage due to the embodiment of the eccentric pawl 16 as a two-arm elongate lever in order to pivot the eccentric pawl 16 in the clockwise direction so that initially the first tooth 21 of the eccentric arc 19 engages the cable 10. Due to the increasing radius of the eccentric arc 19, with further pivoting of the eccentric pawl 16, the cable 10 is increasingly clamped between the counter plate 17 and the outer tothing 20 of the eccentric pawl 16. Meyer et al. does not disclose a rotatable cam having a radius portion on one end and an

eccentric portion on an opposite end with the radius portion having a plurality of scallops on one side thereof and the frame including a base wall and opposed side walls extending from the base wall with the base wall including a clamping surface disposed above the scallops of the radius portion of the cam with the cam cooperating with the cable to generate a clamping force to clamp the cable between the cam and the clamping surface to prevent reverse travel of the cable after tightening the seat restraint.

In contradistinction, claim 1, as amended, clarifies the invention claimed as a seat restraint tensioner for a seat restraint system in a vehicle including a frame for operative connection to vehicle structure and a cable having a first end and a second end. The first end is operatively connected to a seat restraint of the seat restraint system. The seat restraint tensioner also includes a movable mechanism connected to the second end of the cable to apply a force for tightening the seat restraint when activated. The seat restraint tensioner further includes a rotatable cam being pivotally connected to the frame and having a radius portion on one end and an eccentric portion on an opposite end. The radius portion has a plurality of scallops on one side thereof. The frame includes a base wall and opposed side walls extending from the base wall. The base wall includes a clamping surface disposed above the scallops of the radius portion of the cam and the cam is disposed between the side walls. The cam cooperates with the cable to generate a clamping force to clamp the cable between the cam and the clamping surface to prevent reverse travel of the cable after tightening the seat restraint. Claims 16 and 28 have been amended similar to claim 1 and include other features of the present invention.

A rejection grounded on anticipation under 35 U.S.C. § 102 is proper only where the subject matter claimed is identically disclosed or described in a reference. In other words, anticipation requires the presence of a single prior art reference which discloses each and every

element of the claimed invention arranged as in the claim. In re Arkley, 455 F.2d 586, 172 U.S.P.Q. 524 (C.C.P.A. 1972); Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 218 U.S.P.Q. 781 (Fed. Cir. 1983); Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 U.S.P.Q. 481 (Fed. Cir. 1984).

Meyer et al. '664 does not disclose or anticipate the claimed invention of claims 1, 16, and 28. Specifically, Meyer et al. '664 merely discloses a tightening device for use with safety belts with eccentric locking in which a cable is guided about a deflection device which is comprised of an eccentric pawl rotatable about a rotational axis and upon return movement of the cable counter to the tightening direction, the force acting via the deflection end has a sufficient leverage to pivot the eccentric pawl in the clockwise direction and clamp the cable between the counter plate and the outer toothing. Meyer et al. '664 lacks a rotatable cam having a radius portion on one end and an eccentric portion on an opposite end with the radius portion having a plurality of scallops on one side thereof and the frame including a base wall and opposed side walls extending from the base wall with the base wall including a clamping surface disposed above the scallops of the radius portion of the cam with the cam cooperating with the cable to generate a clamping force to clamp the cable between the cam and the clamping surface to prevent reverse travel of the cable after tightening the seat restraint. Meyer et al. '664 fails to disclose the combination of a seat restraint tensioner including a rotatable cam having a radius portion on one end and an eccentric portion on an opposite end with the radius portion having a plurality of scallops on one side thereof and the frame including a base wall and opposed side walls extending from the base wall with the base wall including a clamping surface disposed above the scallops of the radius portion of the cam with the cam cooperating with the cable to generate a clamping force to clamp the cable between the cam and the clamping surface to

prevent reverse travel of the cable after tightening the seat restraint as claimed by Applicants. Therefore, it is respectfully submitted that claims 1, 16, and 28 and the claims dependent therefrom are allowable over the rejection under 35 U.S.C. § 102(b).

Claims 3, 4, and 20 were rejected under 35 U.S.C. § 102(b) as being anticipated by Meyer et al. '664. Applicants respectfully traverse this rejection for the same reasons given above to claims 1 and 16.

Claim 29 was rejected under 35 U.S.C. § 103 as being unpatentable over Meyer et al. '664. Applicants respectfully traverse this rejection.

As to claim 29, claim 29, as amended, clarifies the invention claimed as a seat restraint tensioner for a seat restraint system in a vehicle including a frame for operative connection to vehicle structure, a housing connected to the frame, and a movable piston disposed in the housing. The seat restraint tensioner also includes a cable fitting for connection to a buckle assembly of the seat restraint system above the frame and a cable having one end operatively connected to the cable fitting and another end operatively connected to the piston. The seat restraint tensioner further includes a gas generator operatively connected to the housing for expelling a gas to move the piston to apply a force for pulling-down the buckle assembly and a rotatable cam pivotally connected to the frame and having a radius portion on one end and an eccentric portion on an opposite end. The radius portion has a plurality of scallops on one side thereof. The frame includes a base wall and opposed side walls extending from the base wall. The base wall includes a clamping surface at an angle greater than zero relative to a longitudinal axis of the housing and disposed above the scallops of the radius portion of the cam and the cam is disposed between the side walls. The cam cooperates with the cable to generate a clamping force to clamp the cable between the cam and the clamping surface.

The United States Court of Appeals for the Federal Circuit (CAFC) has stated in determining the propriety of a rejection under 35 U.S.C. § 103, it is well settled that the obviousness of an invention cannot be established by combining the teachings of the prior art absent some teaching, suggestion or incentive supporting the combination. See In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 227 U.S.P.Q. 657 (Fed. Cir. 1985); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 221 U.S.P.Q. 929 (Fed. Cir. 1984). The law followed by our court of review and the Board of Patent Appeals and Interferences is that “[a] prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art.” In re Rinehart, 531 F.2d 1048, 1051, 189 U.S.P.Q. 143, 147 (C.C.P.A. 1976). See also In re Lalu, 747 F.2d 703, 705, 223 U.S.P.Q. 1257, 1258 (Fed. Cir. 1984) (“In determining whether a case of prima facie obviousness exists, it is necessary to ascertain whether the prior art teachings would appear to be sufficient to one of ordinary skill in the art to suggest making the claimed substitution or other modification.”)

Meyer et al. ‘664, either alone or modified, does not teach or suggest the claimed invention of claim 29. Specifically, Meyer et al. ‘664 merely discloses a tightening device for use with safety belts with eccentric locking in which a cable is guided about a deflection device which is comprised of an eccentric pawl rotatable about a rotational axis and upon return movement of the cable counter to the tightening direction, the force acting via the deflection end has a sufficient leverage to pivot the eccentric pawl in the clockwise direction and clamp the cable between the counter plate and the outer toothings. Meyer et al. ‘664 lacks a rotatable cam having a radius portion on one end and an eccentric portion on an opposite end with the radius

portion having a plurality of scallops on one side thereof and the frame including a base wall and opposed side walls extending from the base wall with the base wall including a clamping surface at an angle greater than zero relative to a longitudinal axis of the housing and disposed above the scallops of the radius portion of the cam with the cam cooperating with the cable to generate a clamping force to clamp the cable between the cam and the clamping surface. There is no suggestion or motivation in the art for modifying Meyer et al. '664.

The references, if combinable, fails to teach or suggest the combination of a seat restraint tensioner including a rotatable cam having a radius portion on one end and an eccentric portion on an opposite end with the radius portion having a plurality of scallops on one side thereof and the frame including a base wall and opposed side walls extending from the base wall with the base wall including a clamping surface at an angle greater than zero relative to a longitudinal axis of the housing and disposed above the scallops of the radius portion of the cam with the cam cooperating with the cable to generate a clamping force to clamp the cable between the cam and the clamping surface as claimed by Applicants. The claimed combination is novel and unobvious because the seat restraint tensioner has a relatively low cost, simpler assembly and smaller packaging than current pretensioners. The Examiner has failed to establish a case of prima facie obviousness. Therefore, it is respectfully submitted that claim 29 is allowable over the rejection under 35 U.S.C. § 103.

Claims 5 through 7 and 21 were rejected under 35 U.S.C. § 103 as being unpatentable over Meyer et al. '664 in view of Wier (U.S. Patent No. 6,039,352). Applicants respectfully traverse this rejection for the same reasons given above to claims 1 and 16.

Claims 8 and 22 were rejected under 35 U.S.C. § 103 as being unpatentable over Meyer et al. '664 in view of Wier '352 and further in view of Isaji et al. (U.S. Patent No.

5,707,080). Applicants respectfully traverse this rejection for the same reasons given above to claims 1 and 16.

Claims 10 through 12, 15, and 24 were rejected under 35 U.S.C. § 103 as being unpatentable over Meyer et al. '664 in view of Greiner (U.S. Patent No. 5,495,790). Applicants respectfully traverse this rejection for the same reasons given above to claims 1 and 16.

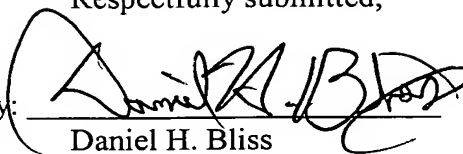
Claims 13, 14, and 17 were rejected under 35 U.S.C. § 103 as being unpatentable over Meyer et al. '664 in view of Downie et al. (U.S. Patent No. 6,213,511). Applicants respectfully traverse this rejection for the same reasons given above to claims 1 and 16.

Claim 18 was rejected under 35 U.S.C. § 103 as being unpatentable over Meyer et al. '664 in view of Downie et al. '511 and further in view of Greiner '790. Applicants respectfully traverse this rejection for the same reasons given above to claim 16.

Obviousness under § 103 is a legal conclusion based on factual evidence (In re Fine, 837 F.2d 1071, 1073, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988), and the subjective opinion of the Examiner as to what is or is not obvious, without evidence in support thereof, does not suffice. Since the Examiner has not provided a sufficient factual basis, which is supportive of his/her position (see In re Warner, 379 F.2d 1011, 1017, 154 U.S.P.Q. 173, 178 (C.C.P.A. 1967), cert. denied, 389 U.S. 1057 (1968)), the rejections of claims 5 through 8, 10 through 15, 17, 18, 21, 22, 24, and 29 are improper. Therefore, it is respectfully submitted that claims 5 through 8, 10 through 15, 17, 18, 21, 22, 24, and 29 are allowable over the rejections under 35 U.S.C. § 103.

Based on the above, it is respectfully submitted that the claims are in a condition for allowance or in better form for appeal. Applicants respectfully request reconsideration of the claims and withdrawal of the final rejection. It is respectfully requested that this Amendment be entered under 37 C.F.R. 1.116.

Respectfully submitted,

By: 
Daniel H. Bliss
Reg. No. 32,398

Delphi Technologies, Inc.
Legal Staff – Intellectual Property
P.O. Box 5052
Troy, Michigan 48007
(248) 813-1230

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